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ABSTRACT

Students in grades four, five, and six who represented three classifications of ability were compared for their conceptualizations, attributions, and attitudes about school grading practices. Intellectually gifted, learning disabled, and normally achieving students were assessed. Significant differences were found among the three groups, particularly for ability to define grading systems and tendencies to perceive the causes for getting good grades as internal and controllable. Linear trends were found on these variables, with mean scores showing an increase from the learning disabled, to normally achieving, to the gifted group. Results were discussed in terms of pyschological theory and issues for educational practice. (Author/DWH)

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PERCEPTIONS AND ATTITUDES ABOUT SCHOOL GRADING PRACTICES AMONG INTELLECTUALLY GIFTED, LEARNING-DISABLED, AND REGULAR ELEMENTARY SCHOOL PUPILS

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PERCEPTIONS AND ATTITUDES ABOUT SCHOOL GRADING PRACTICES AMONG INTELLECTUALLY GIFTED, LEARNING-DISABLED, AND REGULAR ELEMENTARY SCHOOL PUPILS

Abstract

Fourth-, fifth-, and sixth-grade students, representing three classifications--intellectually gifted, learning disabled, and normally achieving--were compared for their conceptualizations, attributions, and attitudes about school grading practices. Signiificant differences were found among the three groups, particularly for ability to define grading systems and tendencies to perceive the causes for getting good grades as internal and controllable. Linear trends were found on these variables, with mean scores showing an increase from the learning disabled, to normally achieving, to the gifted group. Results are discussed in terms of psychological theory and issues for educational practice.

Introduction

Formal evaluation, represented by marking or grading students, is among the most salient experiences of school life. It has been characterized as "the basic currency of our educational system" (Deutsch, 1979) and as a major problem area in school (Dellow, Ross, & James, 1980; Mitchell, 1983).

Despite the importance of grades, comparatively little research has been done on students' attitudes and understandings of grading. Rather, researchers have focused on teachers' attitudes and viewpoints on grading (Rogers, 1982; Salvia, Algozzine, & Sheare, 1977) and students' perceptions of teachers' attitudes toward grades (Raviv, Bar-Tal, Raviv, & Levit, 1983; Weiner & Kukla, 1970; Weiner & Peter, 1973).

The few studies that have examined the student perspective on grades have used elementary and secondary students from regular classrooms. Some of these studies have focused on attitudinal issues (Baum, 1969; Cohen, 1965; Hull, 1980). Other researchers have focused on attributional patterns in response to getting favorable or unfavorable grades (Bar-Tal & Darom, 1979; Mitchell, 1979; Persely, 1954; Raviv, Bar-Tal, Raviv, & Bar-Tal, 1980). To our knowledge, past studies have not dealt with students' conceptual understanding of grading systems or practices. Neither has attention been given to the perspective on grades held by special students--either gifted or learning disabled. Past research has focused more sharply on the motivational aspects of grading, i.e., the impact that grading systems have had on learning-disabled and gifted children's attitudes toward school. For example, Johnson and Yarborough (1978) and Yarborough and Johnson (1980) found that graded classrooms enhanced the adjustment ratings of academically talented students, while non-graded classrooms enhanced the adjustment ratings of low-achieving students. Butterworth and Michael (1975) and Hicks, Edwards, & Sgan

seven learning-disabled students and 46 gifted student were drawn from fourth-, fifth-, and sixth-grade classes. As expected (Stevens, 1980), males were significantly over-represented in the LD sample (M = 55; F = 19; X^2 = 1.7, p = .005); there was no significant sex ratio difference in either the normal or gifted sample.

Questionnaire

Using a cognitive-developmental and social-learning theory framework, the investigators developed an 88-item questionnaire to assess three aspects of student perspectives on grades: attitudes, attributions, and cognitive understandings. A Likert scale format was used for the majority of questions, with endorsements ranging from low (1) to high (4). Questions about both personal experiences and hypothetical situations were asked in the attempt to avoid biasing response sets. All questions were adapted to the schools' grading systems. In this case, a dual system of grading was used. Each child's current level of performance was assessed as either below, at, or above grade level. Number grades were then used to report on progress and achievement within the identified levels. Number grades ranged from 1 (excellent) to 5 (failing). Letter grades were not used. Thus, our questionnaire items concerned attitudes and understandings about number grades, not performance assessments.

Attitude questions focused on the extent to which students liked or disliked grades, saw grades as fair or unfair, and associated punishing or

(1973) reported similar findings from their study of school attitudes as linked to intelligence and grading options. In the related field of attribution, researchers have identified patterns of causal inferences that characterize learning-disabled students' response to successful and unsuccessful experiences, but not to successful and unsuccessful grades. They have found that both learning-disabled and low-achieving students tend to attribute success to external causes (e.g., luck, task difficulty) and failure to internal causes (e.g, lack of ability) (Palmer, Drummond, Tollison, & Zinkgraff, 1982; Pearl, 1982; Pflaum & Pascarella, 1982; Thomas, 1979, Tollefson et al., 1982).

This study concerns how gifted, learning-disabled, and normally achieving children view grades. Three dimensions are explored: (1) Student attitudes and general sentiment about being graded; (2) student causal perceptions and attributions about factors that influence getting favorable or unfavorable grades; and (3) student understandings of grading system, including concepts involved in grading scales, weighted grading, grading on a curve, and grade point averages.

Hypotheses

Hypotheses about the direction of results are necessarily limited because of the scarcity of research in this area. However, drawing upon the research cited above and findings from the general literature on student perceptions of schooling (Weinstein, 1983), a number of trends may be expected. First, we expect that attitudes toward grades will become increasingly positive with increasing levels of achievement. Second, attributions for successful grades are likely to become increasingly internal and controllable with increasing achievement level. Third, conceptual understandings of grades are expected to be increasingly more adequate with increasing levels of achievement.

Method

Subjects

The sample consisted of 213 students from two intermediate schools in a large suburban school district in Washington State, serving a predominantly White, middle-class population. Subjects from both the learning-disabled and gifted samples had been previously identified by the school system and were involved in special programs designed to supplement regular classroom curriculum. In addition, 100 normally achieving students were drawn from intact classes in the fourth (N = 53) and sixth (N = 47) grades. Sixty-

rewarding consequences with grading. We also attempted to ascertain the importance that students themselves attach to grades, as compared to the importance that they believe grades hold for their parents, friends, and teachers. Attribution questions centered on factors identified in the research as important causal factors in achievement contexts (Weiner, 1979)--e.g., effort, ability, task characteristics, teacher characteristics, luck, learning, and interest in subject mattter. These factors were grouped according to three primary and widely discussed attributional dimensions: internality/externality, controllability/uncontrollability, and stability/instability (Weiner, Graham, Taylor, & Meyer, 1983). Finally, questions to assess students' cognitive understandings of grading systems included ranking and ordering of grading scales as well as defining and applying grading systems like grade-point averaging, curved grading, and weighted grading. An "I Don't Know" category was included in this cognitive section to facilitate interpretation of unanswered questions.

Cronbach's alpha was calculated to assess the internal reliability of the questionnaire. Values were: .74 for the attitude items, .70 for the attribution items, and .72 for the cognitive understanding items.

Procedure

Questionnaires were administered in spring 1984 under standard conditions in individual classrooms. Classroom teachers were present, but remained uninvolved in any aspects of data collection. Subjects were guaranteed confidentiality of results to dispel any possible anxiety about their teachers' having access to individual protocols. Questionnaires were read aloud and questions were allowed and encouraged at any time. Administration time ranged from 30 to 60 minutes, depending on grade and achievement level of the respondents, and included appropriate breaks to avoid satiation.

Results from the questionnaire were analyzed for trends and relationships using correlational procedures, and for differences between groups using a one-way ANOVA. Questionnaire item data were factor analyzed to estimate the content validity of scales and subscales.[1] Scores on the attitude subscales, attribution subscales, and concept development subscales constituted the dependent measures; achievement group (gifted, normal, learning disabled) comprised the independent measure.

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[1]Results of the factor analysis are available upon request from the authors. These results generally substantiated the conceptual dimensions of the major scales (attitude, attribution, and concept development), thus providing confidence in the construct integrity of the theoretical framework for this study.

Results and Discussion

Results of the data analysis are reported in Table 1 and Table 2. Negative correlations refer to relationships that are inversely related to increasing levels of achievement. Correlations, means, standard deviations, score ranges, and F-values from the ANOVA are provided in Table 1. In addition, the data were analyzed for linear relationships between means. Significant values from this analysis are reported in Table 2.

Table 1
Description of Scale Score Relationship, Differences, and F-Values

Scale	r^1 $p \leq .005$	F^2 $p \leq .$	Range: Low/High	Means and Standard Deviations		
				Gifted	Normal	L. D.
Attitude Scales						
Grades as Feedback	NS	4.38	12/28	20.78 ± 3.5	22.47 ± 3.12	22.48 ± 3.72
Grades as Expected Aspect of School	-.18	5.11	4/16	10.96 ± 2.86	12.35 ± 2.51	12.46 ± 2.82
Attribution Scales						
Effort	.21	5.01	10/34	29.18 ± 3.55	28.7 ± 3.16	27.25 ± 3.02
Luck	-.25	9.28	2/8	3.87 ± 1.47	5.09 ± 1.86	5.25 ± 1.98
Learning	(-.174, p=.006)	4.48	9/24	18.64 ± 2.54	19.91 ± 2.65	20.03 ± 2.62
Teacher Factors	NS	3.54	19/48	27.91 ± 4.68	30.23 ± 5.17	30.43 ± 5.94
Grading in Non-Academic Classes on Basis of Effort	.30	10.42	1/4	17.3 ± 2.45	16.42 ± 2.62	15.08 ± 2.6
External Causes: Composite Score	-.2105	6.099	24/60	35.25 ± 5.70	38.89 ± 6.53	39.42 ± 7.02

Table 1 (Continued

Scale	$p \leq .005$ r[1]	$p \leq .05$ F[2]	Range: Low/High	Means and Standard Deviations: Gifted	Normal	L. D.
Cognitive Understandings						
Concept Acquisition: Composite Score	.38	17.92	3/15	9.93 ± 2.08	8.70 ± 1.80	7.82 ± 1.62
Problem Applications	.27	8.22	0/2	1.96 ± .21	1.78 ± .56	1.55 ± .63
Curved Grading	.34	13.92	0/3	.83 ± .82	.56 ± .62	.21 ± .45
Weighted Grading	.24	7.26	0/2	.89 ± .71	.54 ± .66	.43 ± .58
GPA	.19	7.01	0/2	.67 ± .76	.30 ± .52	.31 ± .56
Grades as Changeable	.19	7.14	5/19	14.6 ± 2.54	13.04 ± 2.33	13.14 ± 2.28
Don't Know	-.28	10.13	0/54	24.36 ± 15.57	35.01 ± 13.79	36.51 ± 14.59

[1]r-values from Pearson correlations; alpha was set at slightly more stringent level for significance than for the ANOVA analysis. As a result, correlations signficant at $\leq .05$ have not been included.

[2]F-values from the one-way ANOVA; alpha was set at $\leq .05$, allowing for a slightly more liberal standard for judging significance.

Table 2
Linear Comparisons, $p \leq .05$

	F Values
Attitude Scales	
Grades as Feedback	6.65
Grades as an Expected Aspect of School	8.36
Attributional Scales	
Effort	8.31
Luck	15.82
Learning	7.47
Teacher Factors	5.73
Grading in Non-Academic Classes on the Basis of Effort	19.32
External Causes: Composite Score	10.39
Cognitive Understandings	
Concept Acquisition: Composite Score	35.83
Problem Applications	15.70
Curved Grading	26.50
Weighted Grading	13.72
GPA	10.12
Grades as Changeable	9.97
Don't Know	16.37

Effects of achievement level were found on 15 scales, thus upholding the majority of hypothesized relationships between achievement level and student perceptions of grades. Accordingly, our findings are discussed as follows: (1) the relationship of achievement to attitude scores, (2) the relationship of achievement to attributional scores, and (3) the relationship of achievement to cognitive understandings.

Attitude

First, in the attitude area, achievement effects were found on two scales, "Grades as Feedback" and "Grades as an Expected Aspect of School Life." Linear relationships were found on both these scales, with higher-achieving students being less likely than lower-achieving students to see grades as either an expected and necessary part of school life ($F = 8.36$) or as a source of feedback ($F = 6.65$). These findings contrast with several past works (Butterworth & Michael, 1975; Hicks et al., 1973; Johnson & Yarborough, 1978), wherein the use of grades enhances achievement and school attitudes for higher-achieving students.

These findings are not easily explained, although a number of hypotheses seem possible. First, consider the social desirability hypothesis, according to which questions about school practices may elicit responses endorsing grades as helpful and useful. Possibly this applies, at least in part, to the answers from the normal and low-achieving students. However,

this hypothesis fails when the responses from the higher-achieving students are considered. A second hypothesis is suggested by prior studies (e.g., Butterworth & Michael, 1975; Johnson & Yarborough, 1978) which have shown that grades function as an important source of recognition for gifted students. For our sample, perhaps gifted students want recognition but do not see grades as a legitimate source of recognition. Specifically, teachers may deemphasize the use of grades with gifted students and therefore reduce the potential effectiveness of grades as reinforcers. Further, gifted students may more quickly come to see grades as largely an administrative tool and devaluate them on that account. Finally, these discrepant findings may be the result of the diversity in programs for gifted children. Unlike regular and learning-disabled classrooms with more circumscribed curricula, gifted programs may be more flexible and variable. Results from studies of gifted programs may therefore be less generalizable and more sample-specific.

The lack of endorsement of grades as a source of feedback for the gifted students may be more easily understood. If gifted students regularly get good grades, marks come to convey little new information about their work and progress. Alternately, if grades are used either infrequently or arbitrarily, they would also be a poor source of feedback.

Finally, it is noted that these two scales were the only ones that differentiated the three achievement groups in the attitude domain. The

possibility of Type I errors certainly needs to be considered here. The attitude findings are best regarded as suggestive and a stimulus for further research. But the mixed-to-low relationships between achievement level and attitude herein suggest that receiving higher grades (as the gifted) does not necessarily contribute to more positive feelings about grades per se.

Attribution

Second, for attribution, the anticipated trend from external, uncontrollable attributional patterns for lower-achieving students to internal, controllable patterns for academically talented students was confirmed. Significant linear relationships were found on the internal attribution scales. Specifically, endorsements increased as achievement levels increased ("Effort," $r = .21$, $F = 8.31$; "Grading in Non-Academic Classes on the Basis of Effort," $r = .30$, $F = 6.65$). Conversely, increasing endorsements of external, uncontrollable causes were linearly related to decreasing levels of achievement ("Luck," $r = .25$, $F = 15.83$; "Teacher Factors," $F = 5.73$; "External Causes: Composite Score, $r = -21$, $F = 10.39$).

This linear relationship between achievement levels and attributional patterns merits comment. Both the origin and implications of this relationship have been central in a number of related studies (Covington &

Beery, 1976; Covington & Omelich, 1979; Forsyth & McMillan, 1981; Pearl, 1982; Tollefson et al., 1982). This literature suggests that the attributional pattern characteristic of low-achieving students serves a defensive, self-protective function under failure conditions, a situation that differentially characterizes learning disabled, normal, and gifted children's experience in school. Simultaneously, however, this attributional pattern may inhibit achievement-related behavior by reducing expectations for success. In other words, if learning disabled students believe that there is nothing they do, or can do, to influence the marks they receive, then it is unlikely that they will do much to change their grades. By contrast, gifted children's, and to a lesser degree normal children's, identification of effort as an important determinant of good grades enhances their expectation for success, their control over achieving success, and their likelihood of being successful. Further, the affective consequences of external vs. internal attributional patterns seriously affect the student by either detracting from, or enhancing, his or her feelings of self-worth (Weiner et al., 1983). In sum, while the direction of effects is uncertain, the attributional patterns revealed here suggest the cumulative "rich get rich, poor get poorer" effect; those who succeed will probably continue to succeed (the gifted) and those who fail will probably continue to fail (the learning disabled). The research on learned helplessness (Mark, 1983; Thomas, 1979) and reattribution training (Dweck, 1973, Pflaum & Pascarella, 1982; Schunk, 1983) may be particularly helpful

in suggesting ways of enhancing lower-achieving students' motivation to achieve and to approach achievement tasks.

An unexpected pattern of results was found on one attribution measure, "Learning," a scale assessing the relationship between getting good grades and knowing subject material. On this measure, learning-disabled and normally achieving students made significantly higher endorsements for "Learning," (an internal, controllable factor) than did the gifted students. Several methodological explanations are possible. First, the items grouped in the "Learning" scale involved teacher appraisal of learning, i.e., an external judgment of learning, and its relationship to getting good grades. The use of "others" as the judges of learning may have distorted the scale into one with external (vs. internal) meaning for respondents. Second, even if the learning items were not misinterpreted, it is possible that the social desirability of endorsing a characteristic like "learning" may have biased the responses. That biasing effects can occur is shown by the Tollefson et al. (1982) study of normally achieving and learning-disabled adolescents. It was found that learning disabled and normally achieving students endorsed effort equally on a global attribution measure. However, after completing a spelling task and experiencing failure, the learning-disabled students' attributions to effort dissipated. This finding was interpreted to indicate that learning-disabled subjects may have learned to give socially correct answers, particularly when not faced with a specific task or required to explain a failure experience.

Because our questionnaire was not administered within the context of receiving grades or performing on a test, we may have also been more likely to get the socially desirable answer--i.e., the endorsement of learning in the familiar tradition of lip service.

However plausible these methodological points are, a totally different explanation may apply to the gifted students' relatively low endorsement of learning: that the gifted find grades easy to come by, even when they may not have a strong subjective sense of knowing the subject material fully. In short, high intelligence carries the gifted learner through a goodly portion of tasks for which grades are assigned even in the absence of rigorous study. The strength of this explanation may rest in large part on gifted students' perception of the relationship between effort and achievement. As Table 1 shows, effort does receive a strong endorsement among the gifted.

One final comment seems necessary regarding the pattern of attributional scores. While the scores on the attributional scales follow a linear progression from learning disabled to normal to gifted, it is also apparent from the pattern of mean scores that the learning disabled and normal samples' responses are more uniform and similar to each other than are the gifted samples' with either; that is, substantive differences appear more conspicuously when compared to the gifted children's scores. While this may be an artifact of the questionnaire, it may also suggest

that normal and learning disabled children may not differ so drastically in their attributions as hypothesized in much of the attributional and special education literature. Further, this finding may suggest that the normal population should not be treated homogeneously, but divided into more discrete achievement levels when used as a comparison group.

Cognitive Understanding

Finally, for concept development, predicted effects of achievement level were firmly documented. Competency increased in a clear linear relationship with increasing levels of achievement across nearly all items requiring the comprehension of meaning for grading practices.[2] That is, gifted students scored higher than normally achieving students and normally achieving students scored higher than learning-disabled students: "Concept Acquisition," $r = .38$, $F = 35.83$; "Problem Applications," $r = .27$, $F = 15.70$; "Curved Grading," $r = .34$, $F = 26.50$; "Weighted Grading," $r = .24$, $F = 13.72$; "GPA," $r = .19$, $F = 10.12$; "Grades as Changeable," $r = .19$, $F = 9.97$; "Don't Know," $r = -.28$, $F = 16.37$. It is educationally significant to note, however, that while the academically talented students excelled on these scales, none of the students had mastered the constructs

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[2]"Ranking of Grades" was the only scale on which the three groups did not differ.

of grade-point averaging, weighted grading, or curved grading--all of which were reflected to one extent or another in the grading practices of teachers who participated in this study.

While these findings indicate that gifted students have a better grasp of grading constructs than do normally achieving and learning-disabled students, the reasons for superiority are speculative. By definition, however, higher-IQ students generally function at a more advanced stage of cognitive development (Webb, 1974) and are therefore better able to conceptualize grading schemes. But it is likely that learning-disabled and normally achieving students have not been much exposed to, or have experienced, a variety of grading methods. Teachers, particularly of learning-disabled students, may believe that their students are not capable of understanding more complex grading systems and therefore did not teach these systems. Regardless, our observations about the variability and inconsistency of grading in special classrooms leads us to hypothesize that the learning disabled are simply confused about the entire grading phenomenon.

While the conceptual differences between the groups are noteworthy, it is also important to acknowledge the failure of all groups to master the more complex grading schemes (e.g., grade point averaging and curved grading). This finding may be partially the result of the age of the sample; our subjects are fairly young and understandably naive about

combinatorial and relative grading systems. Along this same line, these grading schemes may be used rather intuitively by teachers who are themselves insufficiently grounded in the nature and characteristics of grading systems and calculations to teach them confidently to their students.

Regardless of the reasons for a lack of understanding about grading systems in our sample, the present data give pause to teachers and administrators concerned with what students understand about grades and grading. If grades are to function as a means of communicating and motivating students across all achievement levels, students should have a clear grasp of their meaning. Of course, if grades are used simply to compare and evaluate students for reporting purposes (parents, other teachers) then the meaning of grades is probably less important to the individual student than to the administrator. But this issue of grading purpose underscores a central concern about the use of grades with special populations. Are conventional grades at all appropriate f either the gifted or the learning disabled? This question has been posed for regular classroom situations in the literature surrounding open and individualized classrooms (Good, Biddle, & Brophy, 1975). But it is perhaps even more pertinent in the special classroom where exceptionality in performance is a "given" and the use of grades for comparative purposes would appear to be of little use and convey little information. Similarly, grades may fail as a means of motivating or communicating with special students who may, as in

this study, regard marks skeptically, distrustfully, or just plain indifferently. This question calls for further exploration and examination from the perspective of the student (Rogers, 1982).

In conclusion, it should be understood that this is a preliminary study. A number of methodological problems suggests a need for further refinements in the questionnaire. For instance, the magnitude of our relationships, predicted or otherwise, is by no means powerful, even though statistical significance is shown for most variables. The modest to minimum length of most scales, as well as the limited age range, no doubt contributes, in part, to the pattern of low correlations; but these findings do suggest that modification in the questionnaire may be necessary to better capture the variability in the responses. We have attempted to assess the student perspective on grading by focusing on the attitudes, attributions, and conceptualizations about grades that students of differing achievement levels may hold. While we believe that the data suggest directions for further research, they are necessarily limited and should be tested in more diverse settings with attention to additional variables such as age and gender.

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